CONTEC®

OMEGA 450

Floor Grinder

Instruction manual (USA)

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Declaration of Conformity according to EN ISO/IEC 17050-1

EC-Declaration of Conformity

Month.Year: .

For the machine described below

Product denomination:	Floor Grinder
Model:	Omega 450
Serial number:	

Herewith we declare, that the machine is complying with all the essential requirements of the

Machine Directive 2006/42/EC of the EUROPEAN PARLIAMENT of the 17th of Mai 2006

The person authorized to compile the relevant technical documentation (According to Appendix II Nr. 1. A. Nr. 2, 2006/42/EG):

Name, Surname:	Greb, Johannes
Function:	Technical Manager
Address:	Neuer Weg 17, 57518 Alsdorf, Germany

More information on the compliance with the directive is contained in **Appendix 1.**

This Declaration is given by the manufacturer:

Name:	Contec® Maschinenbau & Entwicklungstechnik GmbH
Address:	Hauptstraße 146, 57518 Alsdorf, Deutschland / Germany

Given by:

Name, Surname:	Greb, Johannes
Function:	Technical Manager

Alsdorf, 22.12.2010

Place/Date Signature

Appendix 1 of the Declaration of Conformity

Month.Year: .

For the machine described below

Product denomination:	Floor Grinder
Model:	Omega 450

Herewith we declare, that the machine is complying with all the essential requirements of the:

Directive 2004/108/EC of the EUROPEAN PARLIAMENT of the 15th of December 2004 on Electromagnetic Compatibility
Directive 2006/42/EC of the EUROPEAN PARLIAMENT of the 17th of Mai 2006

Harmonised Standards used:

EN 12100 - 1 „Safety of Machinery – Basic concepts“
EN 12100 - 2 „Safety of Machinery – Technical principles”

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2 Machine applications

Grinding of horizontal, dry floors such as concrete and steel surfaces with or without a coating and asphalt using CONTEC® grinding tools. The use of the machine outside is only possible in dry weather.

3 Technical Data

Width of grinding	450 mm (18 in)
Width	47 cm (19 in)
Length	88 cm (35 in)
Height	91 cm (36 in)
Weight	75 kg (165 Ibs)
Hose ¢	70 mm (2.86 in)
Height adjustment	Hand wheel
Power	230 V, 5.5 kW (7.5 hp), 3 phase, 20 A speed control
Average value of acceleration a_{hv} *	10.2 m/s^2
Noise level L_{wa} *	105 dB(A)
Noise level Leq *	95 dB(A)

* Data: VÜA Verein zur Überwachung technischer Anlagen e.V.

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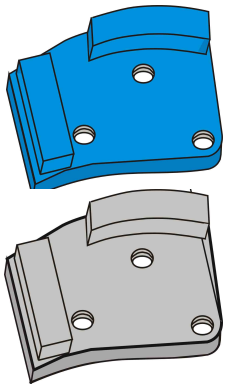
4 Tool applications

4.1 Surface Preparation

- Grinding of Concrete and Cement layers (Grinding to the corn, Removal of the soft surface or loose material)
- Removal of uneven spots or edges
- Preparation of the surface for coatings, self levellers, glue…

Hard surfaces:

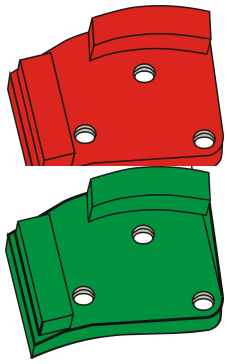


- **CS 16** or **VS 1 blue** (Segment with soft bonding and coarse diamonds, rough finish, dry grinding)

alternativ:

- **CS 40** (as CS 16 but finer diamonds)

Sandy or soft surfaces:

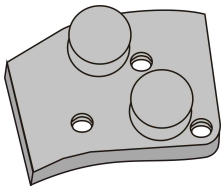


- **CA1** or **VS 2 red** (Segment with hard bonding and coarse diamonds, rough finish, dry grinding)

alternativ:

- **CA 2** (as CA1 but finer diamonds)

High density floors with hard corn on the surface:



- **MBC 0+** or **VS 0** (Segment with soft bonding and coarse diamonds, rough finish, dry grinding)

alternativ:

- **PCD-Grit** (extremely rough finish)

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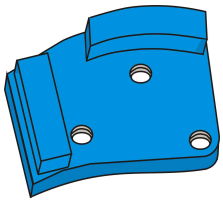
4.2 Terrazzo Floors / Designe Concrete

Different grinding Steps with diamond tools of different grit sizes and bonding up to polishing. Removal of up to 5 mm of the surface depending on the floor. If necessary floors will be cleaned to get rid of holes and pores. Holes and pores will be filled with (filler????) and then polished.

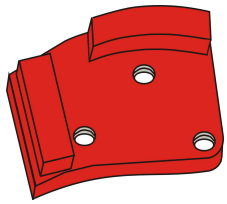
First grinding (step 1)

Diamond plate „square“ / Dry grinding

Hard floors: starting with **CS 16** or **VS 1 blue**
(coarse diamonds)
next step **CS 40** for a finer finish



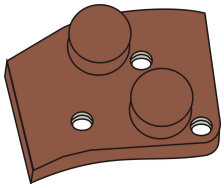
Soft floors: beginnend mit **CA1** or **VS 2 rot**
(coarse diamonds)
next step **CA2** for a finer finish

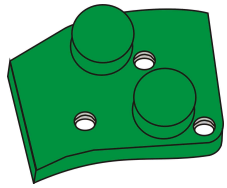


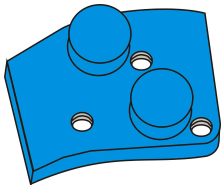
Fine grinding (step 2)

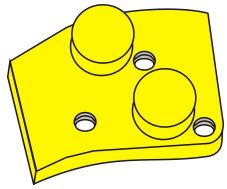
Diamond plate „round“ / Dry- or wet grinding

MBC 0 (Grit 40 brown)
MBC 1 (Grit 100 black)
PS 1 (Grit 100 black)
MBC 2 (Grit 200 green)
MBC 3 (Grit 300 blue)
PS 3 (Grit 300 green)
MBC 4 (Grit 500 yellow)
PS 6 (Grit 600-800 gold)





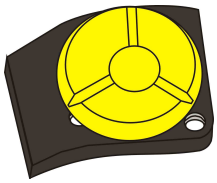




Depending on the floor and the kind of material in the floor some grinding steps can be dropped. If it is a dense concrete floor, the qualities MBC 2 and MBC 4 are normally enough. Wet grinding will achieve a finer optic.

Polishing (step 3)

Grinding with polishing dots – wet or dry until the required surface optic is achieved. Different grit sizes of the dots from 50 to 5000. The floor hast o be cleaned in between the different steps.



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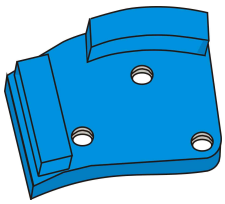
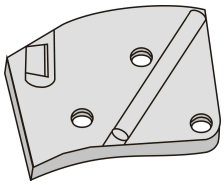
4.3 Removal and grinding of epoxy coatings, glue and paint

Grinding of epoxy- or polyurethane -coatings



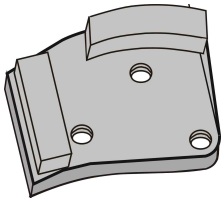
- **CS 16** or **VS 1 blue** (Segment with soft bonding and coarse diamonds, rough finish) for the surface preparation for a new coating or sealer

Removal of elastic materials, glue and self levellers



- **PCD - plates**
- **Attention** – check the spinning direction of the discs, do not use on plain concrete!

Removal of resin coatings



- **PCD - grit** (Segment with rough diamond grit made for an aggressive grinding or cutting of hard glue and resin on hard concrete surfaces, very rough finish!)

5 Safety rules for the operation of the OMEGA 450 floor grinder

Intended application and operation:

Grinding of flat, horizontal, dry surfaces that are typically concrete, asphalt or steel and with or without a coating. For optimum performance and compatibility always use tools supplied by CONTEC®. Operation of the grinder outdoors is only permitted if the weather is dry.

Attention ! The OMEGA 450 floor grinders are constructed according to existing safety rules and regulations. These technical precautions must not be removed or changed under any circumstances. While operating the grinder the following points should also be kept in mind:

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1. The floor grinder may only be operated by trained professionals. The operators have read and be familiar the contents of this manual.
2. The floor grinder must not be operated in areas where the hazard of explosion or fire exists.
3. The floor grinder can only be started when the tools are not in contact with the floor. Do always start the machine in a tipped position.
4. The tools and discs may be hot after use. Take care when changing them.
5. Never operate the floor grinder on a sloping surface.
6. Take care when moving the machine on a sloping surface, substantial rolling forces can be produced.
7. The machine should always be stored in a warm, dry place when not in use.
8. The floor grinder may only be operated with the dust guard (Appendix diagram No.3).
9. Only CONTEC® original tools and spare parts are to be used.
10. The grinder should only be operated with all safety guards in position.
11. When changing tools, during transportation, cleaning, repair or maintenance the grinder must be disconnected from the mains.
12. The operator must never leave the machine unattended during operation.
13. Before leaving the machine all rotary parts must be brought to a standstill. Electric models must be disconnected from the power supply. Ensure the machine cannot roll or move by itself.
14. After any maintenance and adjustment all safety guards must be refitted.
15. Ear protectors must be worn.
16. Eye protectors must be worn.
17. Safety shoes with steel caps must be worn.
18. When operating the grinder produces large volumes of dust the grinder should be connected to a suitable dust collector.
19. Depending on the floor (floor coating) grinding can produce gases. The operator must be held responsible if the gases generated are hazardous and whether protection is necessary. Grinding floors containing asbestos is especially dangerous and can cause health problems. Special masks must be worn which keep the breathing air clean. A dust collector must be used and should be equipped with filters suitable for asbestos dust.
20. The floor must be brushed before grinding to prevent loose material collecting in the tools and then being thrown out with force. Anchor screws and bolts in the floor can also be seen better if the area is clean. If the grinding head strikes an anchor screw or bolt then serious damage can be caused to the machine and grinding head.

6 Operating

After mounting the appropriate tools, the operation of the OMEGA 450 grinder can begin.

Connect the hose of the dust collector to the hose port of the grinder.

Adjust the grinder by turning the hand wheel of the height adjustment (see diagram No. 35/36) so that the motor axis is 90° level to the floor. Set the knob of the speed control (see diagram No. 67) into the first third of the scale (see diagram No. 65). Lift the tool slightly from the floor by tilting the machine onto it's back wheels. Switch the motor on.

Attention ! When switching on the motor the machine jumps slightly.

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After the motor has reached full rotation place the tools carefully on to the floor. If the machine is correctly adjusted (see above) it is easier to move across the floor. If the machine pulls heavily to the left or right, the machine has to be re-adjusted with the hand wheel of the height adjustment.

Attention ! Never switch the motor on while the tools still touch the floor.

The correct speed of the grinding disc depends on the floor and on the tools you use. In case of strong vibration, the speed of the disc has to be reduced.

7 Changing and replacing of the tools

Attention ! Before working on the grinder allow the motor to come to a complete stand still and disconnect from the mains.

- Tilt the machine onto the back wheels and rest it on the handlebar.

- Remove the tool bracket (see appendix, tools No. 11) by loosening the 3 Alan screws.
- All tools (see appendix, tools No. 51/55) are fixed with 3 screws on the tool bracket.

- Loosen and remove the screws with a 13 mm key.

- Check the grinding tool for wear and tear for the next application.

- Fix a new tool with the 3 screws on the tool bracket.

- Adjust the different heights of the tools with the hand wheel of the height adjustment. The motor axis of the grinder has to be 90° level to the floor.

8 Appendix

Diagrams
Wire diagram
Tools
Part list

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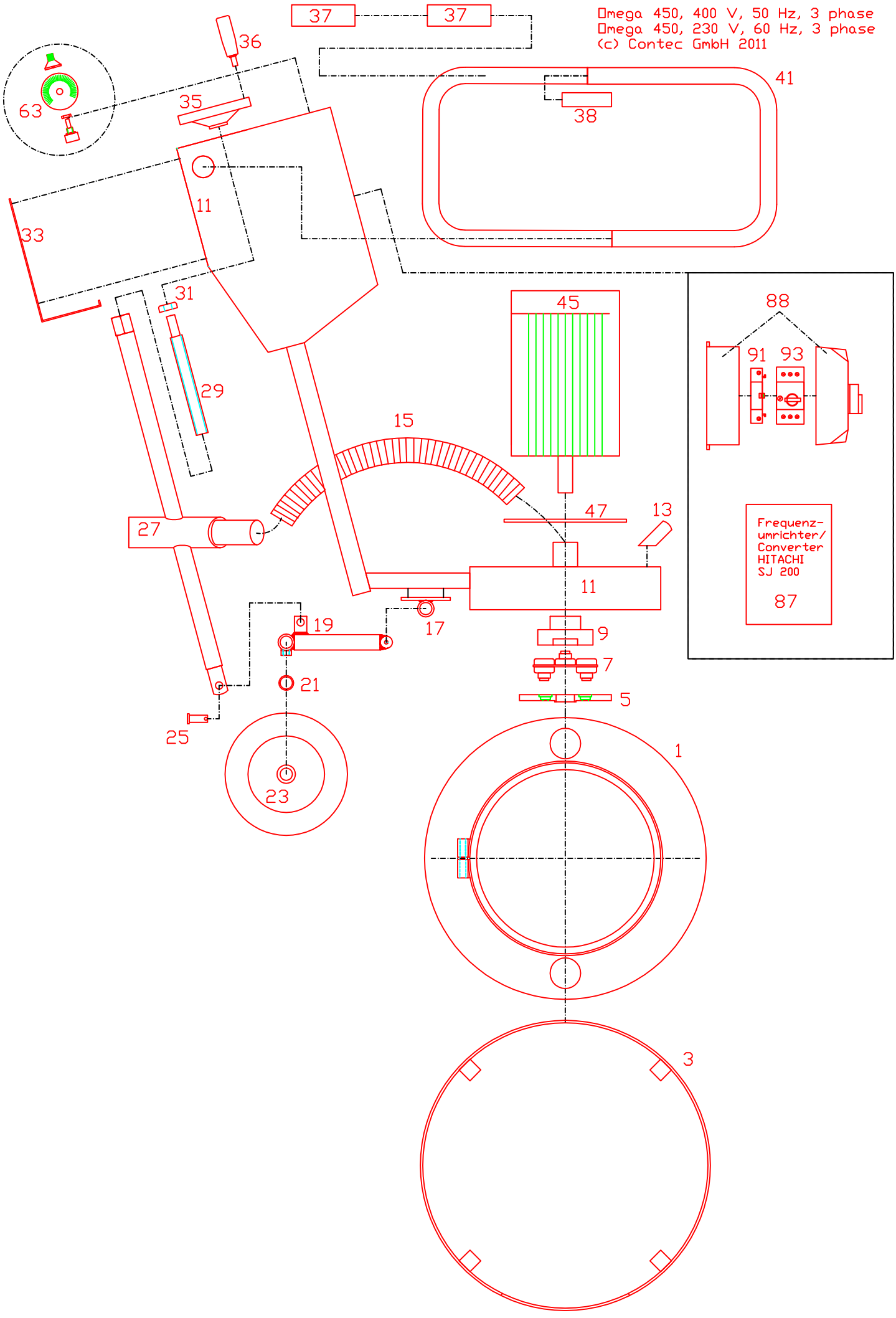
Omega 450, 400 V, 50 Hz, 3 phase
Omega 450, 230 V, 60 Hz, 3 phase
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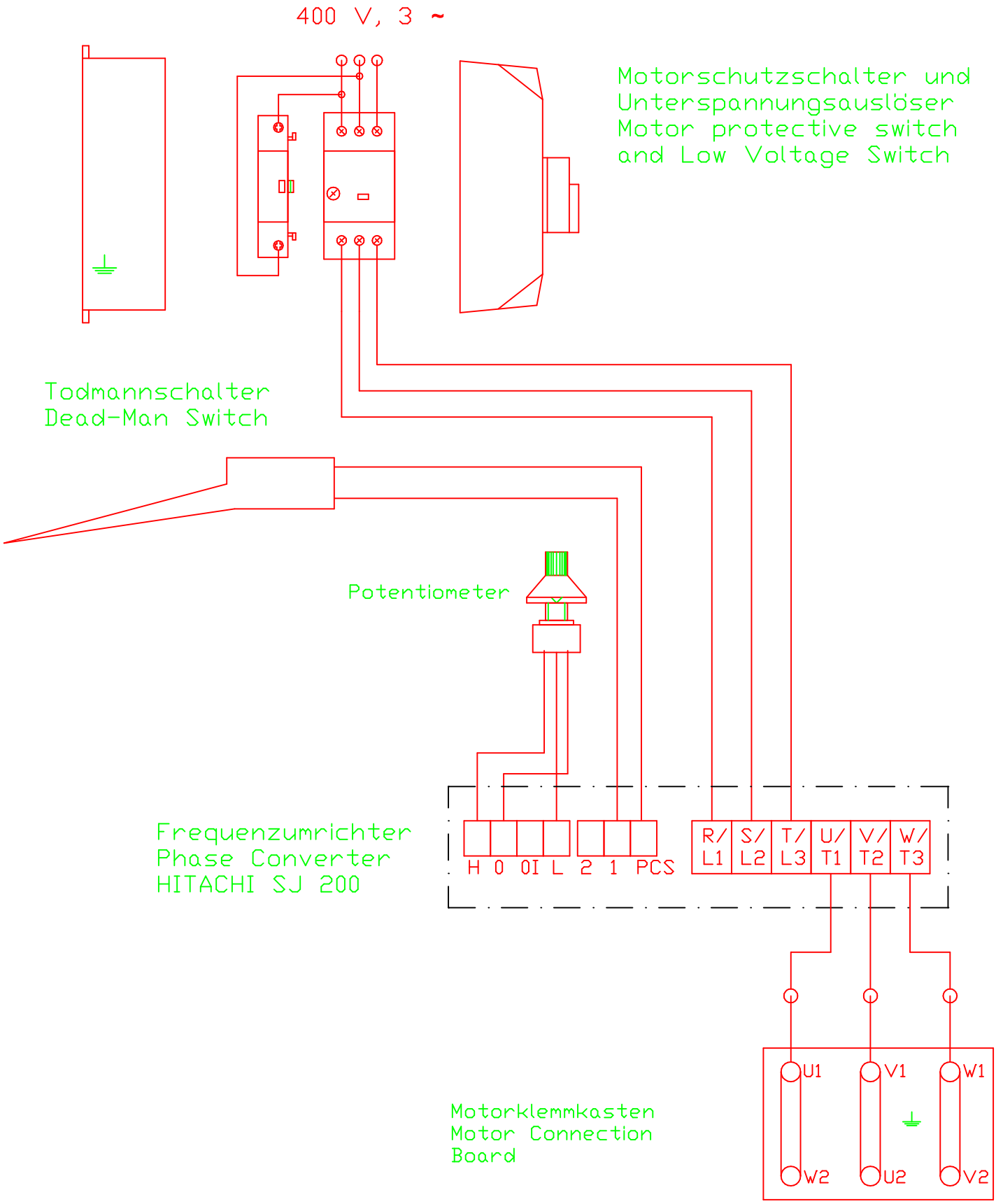

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			Gepr.						
			Norm						
						Firma CONTEC GmbH 57518 Alsdorf	(Zeichnungsnummer)		Blatt Bl.
Zust.	Änderung	Datum	Name	(Ursp.)			(Ers.f.)	(Ers.d.)	

Omega 450 Werkzeuge
Omega 450 Tools
Omega 450 Outillages
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